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General information on software (KSL-SUB support)

In this Software Newsletter, we want to address all users of d&b software and provide a general overview of the latest updates and new features.

- ArrayCalc Version 10.12.1 and higher supports the KSL-SUB. Other new features include extended mounting options for the A-Series and SL-Series.
- ArrayCalc Viewer V1.10 should be used to open projects generated with the latest version of ArrayCalc.
- R1 Remote control V3.12.1 and higher now also supports the new KSL-SUB in combination with the D80 amplifier with firmware version 2.22.01.
- Specific KSL-SUB setups have been created for ground stacked, flown, and ArrayProcessing applications. The KSL-SUB setup can be used with the KSL-SUB, KSL-GSUB, KSLi-SUB and KSLi-GSUB. Amplifier firmware V2.22.01 on the D20, 10D and 30D amplifiers fixes some minor bugs.

For more information, please check the release notes which can be found in the download section of the d&b website at dbaudio.com.
R90 Touchscreen remote control.

New firmware V1.4
New feature: Logging errors/events

A log screen has been added to show errors and/or events by date/time, similar to the amplifiers. Entries do not disappear like the current error messages. Instead, they are kept for later reading.

New firmware V1.6
New features: Energy-saving mode and lock screen

Using the Energy saving mode, users can configure the number of minutes of inactivity before the R90 screen is automatically turned off from 1 to 30 minutes. For further details, please check the R90 manual update.
Loudspeaker setups on 30D
Support for M2 monitor and J-INFRA on 30D

After careful consideration and repeated tests, the following decision has been made by PM and R&D with regard to support for the following loudspeaker systems on the 30D amplifiers.

- The **M2 monitor** setup remains implemented on the 30D amplifier.
  The maximum number of loudspeakers allowed for the M2 monitor on this platform has been reduced from 2 to 1 per pair of amplifier channels. This was necessary to prevent the whole amplifier from entering a protection state resulting in the loss of audio at certain drive levels. Any other technical solution would have severely limited the output of even a single connected M2 monitor.

- The **J-INFRA** setup remains implemented on the 30D amplifier.
  There is a risk that, when using the J-INFRA setup, the amplifier will enter a protection state resulting in the loss of audio at sufficiently high drive levels. There is no other technical solution than to completely remove support for the J-INFRA on the 30D. Since virtually no cases have been reported where this problem occurred, we have decided against removing J-INFRA support from the 30D.

**Generally,** we advise not to combine the J-INFRA and the 30D amplifiers for future installations.

Should the problem with the J-INFRA described above arise in an existing installation, the matter should be addressed **exclusively to the responsible regional sales manager** to evaluate and resolve the situation on an individual basis.

We are making every effort to ensure that a similar situation will not occur in future amplifier models.
NoizCalc Version 2.8 update


It provides a common basis for noise predictions for European member states. Calculations with CNOSSOS-EU are slightly more advanced than with ISO 9613-2, thus providing higher accuracy. Furthermore, where ISO only considers the scenario of preferable weather conditions for sound propagation (constituting a worst-case noise scenario regarding meteorology), CNOSSOS-EU simultaneously calculates a second set of attenuation factors for a homogeneous atmosphere. The two scenarios are then “mixed” according to a user-definable probability of favorable weather conditions pFav (= “how much worst-case”).

d&b Soundscape / DS100: Overview

The update of R1 to V3.12.1 and DS100 firmware V1.12.01 provides some fundamentally new and long-awaited functions for the DS100 and d&b Soundscape platform.

Overview:

- **Scenes** for the DS100 platform:
  Hardware-based scene memory for all DS100 parameters including Matrix, En-Space, and En-Space.
  Scenes can be created in R1 online or offline as Device scenes within more or less the same workflow and feature set as used for an R1 snapshot.
  Scenes can also be recalled directly from the DS100 via OSC even without R1 present.

- **New room signatures** for En-Space:
  Two additional En-Space rooms. This is significantly different to what was available until now and goes beyond the approach of the existing concert hall:
  - Theatre small: Reverberation time: 1.3 s (T40 / 200 Hz – 2 kHz)
  - Cathedral: Reverberation time: 5.6 s (T40 / 200 Hz – 2 kHz)

- **Spread factor per function group** for En-Scene:
  The spread factor is a multiplier for the spread parameters of the input objects within an individual function group.
  The spread factor is used to optimize the energy distribution within a function group to meet the requirements of the specific system design and is adjustable separately for each group.

- **User-defined ambient temperature parameters** for En-Scene and En-Space:
  The ambient temperature can now be adjusted to adapt the algorithm-based calculations of the propagation delays of En-Scene and En-Space to the actual speed of sound.

All appropriately updated documents can be downloaded from the d&b website:
- TI 501 d&b Soundscape 1.7
- DS100 OSC Protocol 1.3.0
- DS100 Firmware V1.12.01 Release notes

Software requirements for these new features:
- R1 V3.12.1 or higher
- DS100 Firmware V1.12.01 or higher
SCENES

Feature overview

- The DS100 hardware scene memory covers all DS100 parameters found on remote views, including I/O processing, Matrix settings, and all En-Scene and En-Space parameters.
- The feature set and the workflow for creating scenes is more or less the same as for an R1 snapshot but is limited to the functions of the DS100.
  - Scenes can be created in R1 online or offline in the new “Device scenes” view.
  - Scenes can then be transferred from R1 to the hardware memory of the DS100.
  - Or vice versa, scenes already existing in the DS100 memory can be transferred to R1.

Scene creation:

New System view “Device scenes“:

Device scenes view: Scene creation like snapshot creation
Device scenes view: Scenes content management

Scenes structure:
Up to 999 scenes (depending on the size of the individual scenes)
- Structured as a flexible list
  - Easy and smart scene insert when creating new scenes.
  - List can be ordered by renumbering the scenes.
  - Scenes can be transferred between the DS100 and R1 in both directions.
- Can be recalled from the hardware memory of the DS100
  - Either by direct recall of the relevant scene number or by stepping through the scene list using “Previous” or “Next”.
  - Via R1 AND also via OSC directly from the DS100 (without the need of R1 present).

Scene list:
- New scenes at the end of the list are created with the consecutive number before the dot.
- New scenes, which are inserted between two existing scenes, are given a number that lies between the previous scene number and the following scene (e.g. new scene between scenes 2.00 and 3.00 receives the number 2.50).
- The scene number can also be edited manually to rearrange the order of the list.
Scene sync between DS100 and R1:

- Sync status is shown in the R1 scene list.
- All or selected scenes can be synced between R1 and DS100.
- R1 and DS100 scene lists can be different.
- Scene control refers to the DS100 memory.
Scene recall:

- New functions in R1: direct scene recall or recall using the Previous or Next function.

- OSC commands for direct scene recall, Previous scene and Next scene are integrated.
Scenes: object positioning - absolute & relative

Object positions for En-Scene can be stored in scenes as:

- **Absolute coordinates** (referencing the zero point of the configuration in AC/R1).
- **Relative to one of the coordinate mapping areas of the AC/R1 configuration.**
  - Relative and absolute modes as well as the references mapping area can be selected independently for each scene.
  - For different objects, absolute and relative positions within a scene are possible (if the objects are split into different Positioning Views).
New room signatures for En-Space

Feature overview:

- Two new and significantly different rooms have been added to the seven existing concert halls, extending flexibility as well as the range of applications that can be addressed with En-Space:
  - The new rooms add reverb signatures to En-Space with half or double the average reverb time of the concert halls.
  - They feature the same outstanding sonic resolution and quality as the concert halls.
  - They can also be adapted in the same way to all kinds of loudspeaker setups, and are simple to set up and easy to use.
New En-Space signatures

Theatre – small
Alighieri Theatre, Ravenna
Reverb time: 1.3 sec

Cathedral
San Vitale, Ravenna
Reverb time: 5.6 sec

En-Space reverb times overview:
En-Space user interface
Updated room selector
Spread factor per function group for En-Scene

Feature overview

- The spread factor makes handling the object spread adjustable within the individual function groups.
  It is used to optimize energy distribution within an individual function group to meet the requirements of the specific system design and is adjustable separately for each group.

- With a value between 0.5 and 2, the spread factor acts as a multiplier for the spread parameters of the individual objects within the respective function group.
  - The default value for the factor is 1 (i.e. no effect)
  - The maximum spread value of 1 for an object is not exceeded when multiplied by the factor (even if it were mathematically possible, the function is limited accordingly).
  - The spread factor is not effective or available for function groups without object positioning (Outfill, SUB array, Ceiling, Mono out).

User interface

Devices / Function groups

![User interface screenshot](image-url)
Remote view:
AutoCreated for Soundscape outputs
User-defined ambient temperature parameters for
En-Scene and En-Space

Feature overview

- Temperature input for propagation delays within En-Scene and En-Space algorithms.
- The value is used to align algorithm-generated signal delays for object positioning and system alignment with the actual speed of sound.

- The current ambient temperature can be set in R1 on the "Devices" ➤ "DS100" ➤ "Ambient conditions" tab and on Remote views.
- This only affects delays that are set automatically by the En-Scene and En-Space algorithms. Delay values that are set manually (such as function group delays, matrix cross-point delays, delays at inputs and outputs, etc.) are not modified by this parameter.